REMARKS

In the Office Action mailed on July 20, 2005, claims 1-40 were pending. Claims 28-34 were withdrawn from consideration. Claim 25 was allowed. Claims 1-3, 5-7, 15, 16, 26, 27, 35 and 36 were rejected, and claims 4, 8-14, 17-24 and 37-40 were objected to.

Claims 1, 26 and 35 have been amended. The amended claims do not contain new matter, and support for the amendments can be found in paragraph [0025] of the originally filed specification and claims. Applicants respectfully request admission of the amended claims.

I. Rejections under 35 U.S.C. 102

A. Rejection under U.S. Patent No. 4,365,018 ("Crutchfield")

In the Office Action at page 2, number 3, claims 1-3, 5-7, 15, 16, 35 and 36 were rejected under 35 U.S.C. 102(b) as being anticipated by Crutchfield. The Examiner stated that Crutchfield's step of applying a solution of hydrogen peroxide to the surface of the imaging element would inherently be capable of simulating photoactive properties on the surface and demonstrating hydrophilicity of the surface by exposing the surface to electromagnetic radiation having one or more wavelengths of visible light as presently recited in claims 1 and 15. Applicants respectfully traverse this rejection.

1. The Present Invention

The present invention as recited in claim 1 is a method of simulating photoactive properties on a surface, comprising: providing a surface; and applying at least one peroxide-containing material over at least a portion of the surface.

The present invention as recited in claim 15 is a method of demonstrating hydrophilicity of a photoactive surface by exposing the surface to electromagnetic radiation having one or more wavelengths of visible light, comprising: providing a substrate having a photoactive surface; and applying at least one peroxide-containing material over at least a portion of the surface.

The present invention as recited in claim 35 is an article, comprising: a surface; and at least one peroxide-containing material deposited over the surface.

2. Crutchfield

Crutchfield discloses a self-exposing imaging element comprising a support member, a light sensitive layer, and a layer containing reagents which will chemically react in a chemiluminescent reaction to produce light which exposes the light sensitive layer when in contact with an original. The reagents in the light generating layer are physically or chemically segregated prior to exposure to prevent reaction, for example, by encapsulation of one of the reactants, the reaction solvent, or a catalyst. A copy is made by placing a self-exposing imaging element in contact with an original, activating the light sensitive layer by causing the reactants to mix or introducing the reaction solvent or catalyst and using the radiant energy generated to produce an image of the original in the light sensitive layer by reflex imaging or direct transmission imaging.

3. Traversal of the Rejection

For a proper rejection under 102, the cited art reference relied upon must be "analogous art". A person of ordinary skill in a particular

art of interest will not likely know about prior art in a different and unrelated field of technology. Such art in a different and unrelated field of technology, therefore, does not render an invention unpatentable. Thus, for purposes of evaluating the patentability of claimed subject matter, one must make certain that a particular reference relied upon constitutes "analogous art". In re Clay, 966 F.2d 656, 658-659, 23 U.S.P.Q.2d 1058, 1060-1061 (Fed. Cir. 1992).

In this case, the Crutchfield reference is not analogous art for the present invention. The present invention as recited in claim 1 is a method of simulating photoactive properties on a surface comprising applying at least one peroxide-containing material over at least a portion of the surface. The art that the present invention relates to is photoactive substrates (i.e., substrates having a coated surface which breaks down organic contaminants).

In contrast to the present invention, Crutchfield is directed to a copier (i.e., a device for copying an original such as a sheet of paper). The relevant art for Crutchfield is copying devices, not photoactive substrates like the present invention. One of ordinary skill in the art would not consider art directed toward a copier when inventing ways to simulate photoactive properties on a surface of substrate like glass.

Further, in the present invention, photoactive behavior is simulated by applying a peroxide-containing material over the surface. As stated in paragraph [0022] of the specification, the addition of a peroxide material to an inactive photoactive surface can provide the surface with properties similar to that of the surface in a photoactive state. In the

specification at paragraph [0021], it states the invention simulates the desired effect in the absence of activating radiation.

Crutchfield requires a light generating layer. An exemplary light generating layer in Crutchfield is made up of luminol, a base and an oxidizing agent (like hydrogen peroxide) which react to generate light. In Crutchfield, it states to be useful in light generating, reactions should occur quickly and provide high energy output over a short period of time.

In the present invention, there is no light generating layer. Rather, a peroxide containing material is simply applied on a surface. It is not reacted with other materials such as luminol and a base to generate light. Since no light is generated in the present invention, it would not be appropriate to consider art which involves generating light as prior art.

For all of the reasons provided above, Crutchfield is not analogous art to the present invention and is therefore not prior art. A person of ordinary skill in the art of photoactive substrates would not look to prior art related to copiers. As a result, the present invention as recited in claim 1 is not anticipated by Crutchfield, and Applicants respectfully request the withdrawal of this rejection.

Because Crutchfield is not analogous art for the reasons stated above and therefore not prior art to the claims in the present application, Applicants respectfully request the withdrawal of the rejection of claims 2, 3, 5-7, 15, 16, 35 and 36.

B. Rejection over U.S. Patent No. 6,258,969 ("Sawai")

In the Office Action at page 3, number 4, the Examiner rejected claims 26 and 27 under 35 U.S.C. 102(b) as being anticipated by Sawai. Applicants respectfully traverse the rejection.

1. The Present Invention

The present invention as recited in amended claim 26 is a method of simulating photoactive hydrophilicity on a surface, comprising: depositing a photoactive coating over at least a portion of the substrate to provide the photoactive surface; and contacting the surface with an at least partly hydrolyzed polyalkoxysiloxane material.

2. Sawai

Sawai discloses a polyalkoxysiloxane of the following rational formula: $SiO_a(OR)_b(OH)_c$ wherein R is a C_{1-4} alkyl group, a=0.86 to 1.30, b=2.18 to 1.30, and $c \leq 0.10$.

3. Traversal of the Rejection

For a proper rejection under 102, the cited reference must disclose each and every limitation of the invention. As recited in amended claim 26, the present invention comprises depositing a photoactive coating over at least a portion of the substrate to provide the photoactive surface. Sawai discloses a specific polyalkoxysiloxane. It does not disclose depositing a photoactive coating over a portion of a substrate. As a result, claim 26 is not anticipated by Sawai, and Applicants respectfully request the withdrawal of this rejection.

Claims 27 depends from claim 26 and recites the invention in varying scope. As discussed above, Sawai does not disclose

depositing a photoactive coating over at least a portion of the substrate to provide the photoactive surface as recited in claim 26 as further limited by 27. As a result, claim 27 is not anticipated by the cited reference, and Applicants respectfully request the withdrawal of this rejection of claim 27.

II. Claim Objections

In the Office Action at page 3, number 5, claims 4, 8-14, 17-24 and 37-40 were objected to as being dependent on a rejected base claim. The Examiner stated that the claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, as discussed above, Applicants believe that the independent claims as amended are not anticipated by and are patentable over Crutchfield. In the event the Examiner maintains the rejections, Applicants will consider redrafting the objected claims in independent form.

Conclusions

In light of the amendments and remarks presented in this correspondence, Applicants respectfully request withdrawal of the following rejections: rejection of claims 1-3, 5-7, 15, 16, 35 and 36 under 35 U.S.C. 102(b) as being anticipated by Crutchfield; rejection of claims 26 and 27 under 35 U.S.C. 102(b) as being anticipated by Sawai; and the allowance of claims 1-27 and 35-40.

If any questions remain about this application, the Examiner is requested to contact Applicants' attorney at the telephone number provided below. Thank you.

Respectfully submitted,

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